

FY2019-2023 CIP update: preliminary MBTA program sizes

Presentation to FMCB

March 12, 2018

Overview: MBTA CIP Program Changes

- Proposed FY19-23 CIP programs are 10% larger than FY18-22 CIP
 - Significant investment is needed to meet the Strategic Plan goals of accelerating SGR investment and executing major modernization projects
 - Given available and anticipated Federal and State funds, no new MBTA debt issuance expected until Calendar Year 2019
- MBTA CIP Programs have been renamed and resized:
 - New investment programs for “megaprojects” or sets of projects linked to a common goal or outcome (e.g. GLX, RL/OL Improvements)
 - Program name changes intended to provide better transparency and accountability
 - Updated sizes reflect results of planning efforts, policy decisions, or other commitments (e.g. Fleet and Facilities Plan, L264 agreement)



New project-based programs

The proposed FY19-23 MBTA CIP will include three new investment programs that represent large (>\$500M), complex, cross-cutting projects tied to specific strategic goals or outcomes

Green Line Extension

- **Goal:** Extend the Green Line from Lechmere to College Ave
- **Investments:** Stations, Infrastructure, and Vehicles

Red Line/Orange Line Improvements

- **Goal:** Replace the Red Line and Orange Line fleet and build the infrastructure necessary to meet three minute headways goals
- **Investments:** Vehicles, Signals, Infrastructure

AFC 2.0

- **Goal:** Implement a new reliable and convenient fare payment and collection system, integrated across all modes, to replace CharlieCards/Tickets and their supporting hardware and software
- **Investments:** Systems Integrator, Technology, Infrastructure

Commuter Rail Safety and Resiliency (PTC)

- **Goal:** Meet and exceed federal requirements to install PTC and ATC systems while improving overall resiliency of the CR network
- **Investments:** PTC Implementation, ATC Implementation, fiber installation, vegetation management



Reliability programs



Reliability / MBTA / Bridges and tunnels

FY2018-2022 size:

- \$ 544.7 million over five years

Justification for FY2019-2023 program size:

- Maintain FY18-22 CIP Program Size

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

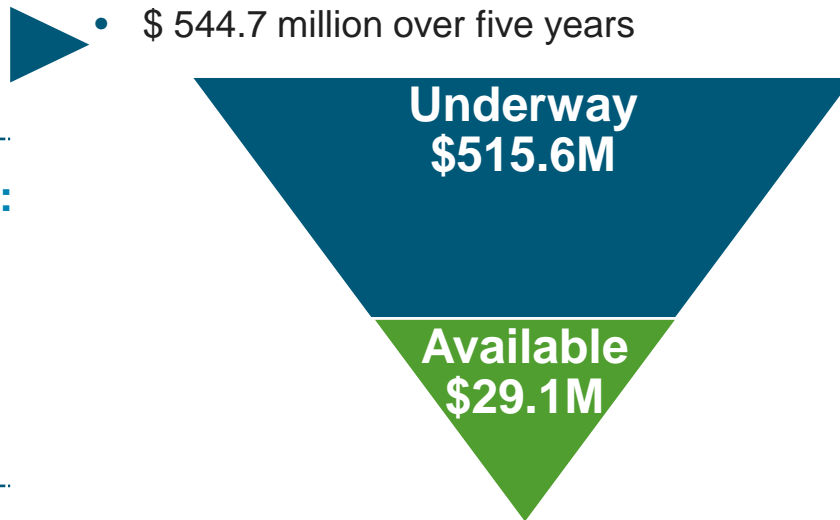
- **Not forecasted in PfP tool**

Other comments:

- Major projects currently underway are Gloucester Draw and Bridge Bundle Contract for six Commuter Rail bridges
- Also includes North Station Draw 1 and projects to inspect and repair bridges and tunnels systemwide

FY2019-2023 size:

- \$ 544.7 million over five years



Program purpose and need statement:

- This program repairs, reconstructs and replaces MBTA commuter rail and transit bridges and tunnels systemwide.

Reliability / MBTA / Facilities

FY2018-2022 size:

- \$112.6 million over five years

Justification for FY2019-2023 program size:

- Increased program size due to Integrated Fleet and Facilities Plan requirements and commitment to maintain, upgrade, and improve bus maintenance garages consistent with the L264 agreement

Program performance:

Tracker target

- % of facilities with condition rating <3.0 in TERM scale

PfP tool forecast

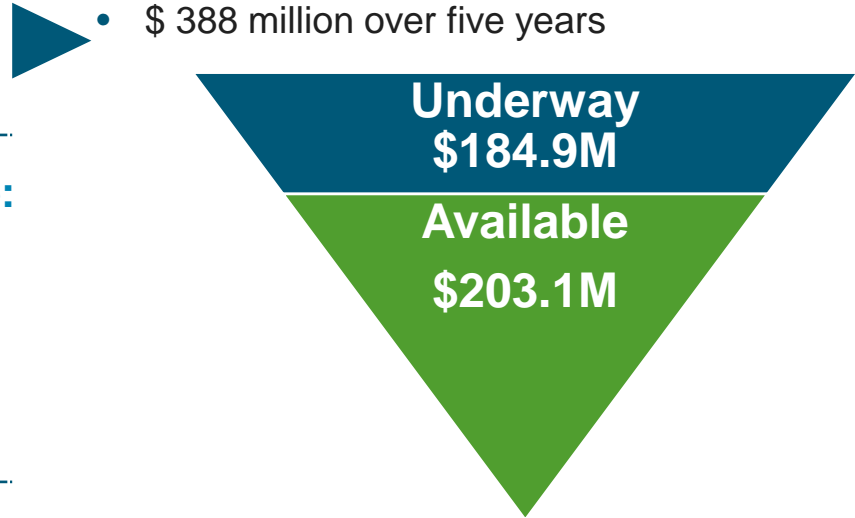
- Not forecasted in PfP tool

Other comments:

- Major projects currently underway are the Commuter Rail Iron Horse Operations Control Center, facility roof replacements, rail and bus lift upgrades, and upgrades to HVAC, exhaust, and fire safety systems
- Rebuild of Cabot and Wellington Yards is funded in the RL/OL Improvements program

FY2019-2023 size:

- \$ 388 million over five years



Program purpose and need statement:

This program rehabilitates and upgrades maintenance and administrative facilities that support MBTA operations.

Reliability / MBTA / Revenue vehicles

FY2018-2022 size:

- \$1,703.0 million over five years

Justification for FY2019-2023 program size:

- RL/OL vehicle procurement moved to RL/OL Improvements program (-\$585M)
- Net increase to overall vehicles investment to align with estimated annual investment needed for fleet requirements identified in the Integrated Fleet and Facilities Plan

Program performance:

Tracker target

- % of units beyond Useful Life Benchmark

PfP tool forecast*

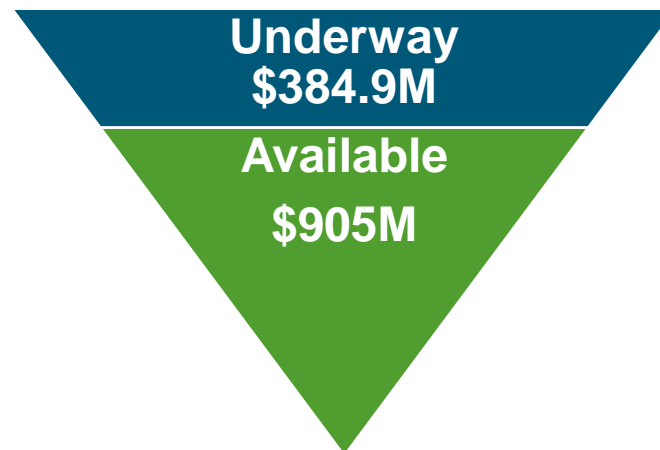
- Bus – 2.72 average TERM-lite SGR score by 2022
- Rapid transit – 3.61 average TERM-lite SGR score by 2022

Other comments:

- FY18-22 funding tagged “pending fleet plan” will be programmed in FY19-23

FY2019-2023 size:

- \$ 1,289.9 million over five years



Program purpose and need statement:

- This program rehabilitates and replaces the MBTA revenue fleet, which includes commuter rail, heavy rail, light rail, bus and ferry units.

* This PfP forecast needs to be verified, will do before CPC meeting

Reliability / MBTA / Stations

FY2018-2022 size:

- \$400.8 million over five years

Justification for FY2019-2023 program size:

- Maintain FY18-22 CIP program size

Program performance:

Tracker target

- % of stations with condition rating <3.0 in TERM scale

PfP tool forecast

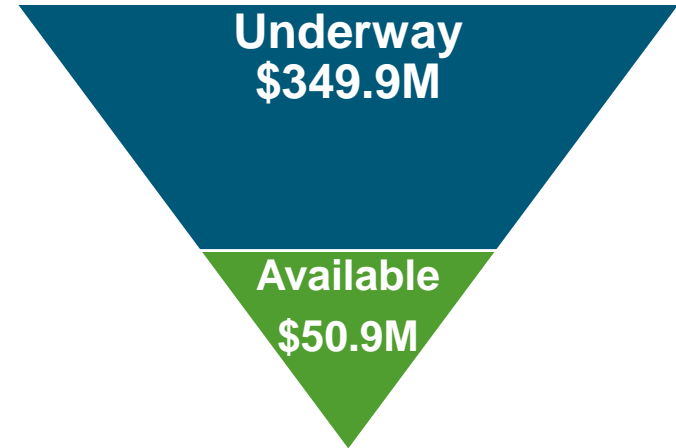
- Not forecasted in PfP tool

Other comments:

- Major projects underway include Wollaston Station, South Shore Garages, Ruggles Station Upgrade, Harvard Busway Repairs, and parking lot paving
- Projects primarily focused on SGR; accessibility-driven projects funded in Modernization/Accessibility program
- Updating station signage, wayfinding, and other customer improvements funded in Modernization/Customer Experience and Technology program

FY2019-2023 size:

- \$ 400.8 million over five years



Program purpose and need statement:

- This program rehabilitates and upgrades MBTA stations (e.g., commuter rail, commuter boat, subway and bus stations)

Reliability / MBTA / System upgrades

FY2018-2022 size:

- \$397.4 million over five years

Justification for FY2018-2022 program size:

- Updated program size to focus on core systems and equipment reliability
- Unallocated “capital maintenance” funds distributed to specific programs and projects

Program performance:

Tracker target

- **Non-revenue vehicles: % of vehicles beyond ULB**

PfP tool forecast

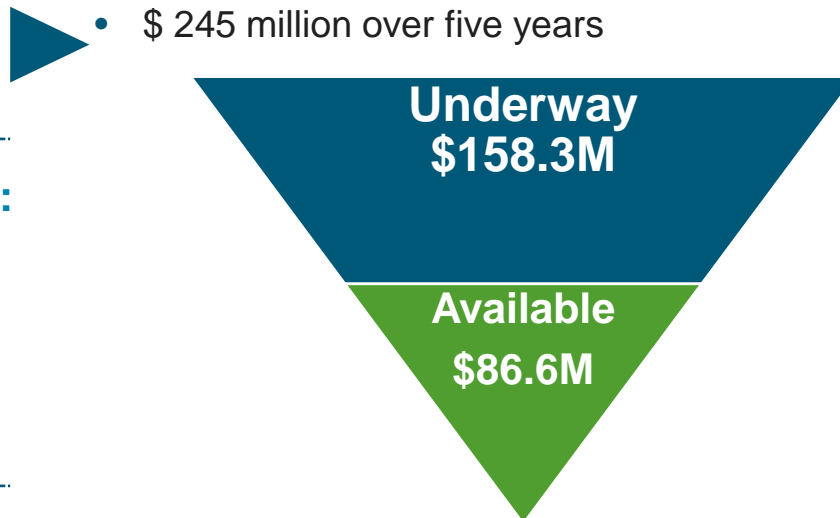
- **Not forecasted in PfP tool**

Other comments:

- Major projects underway are Systemwide radio upgrades, Non-Revenue Vehicles, and Transit Asset Management implementation

FY2019-2023 size:

- \$ 245 million over five years



Program purpose and need statement:

- This program upgrades a wide range of MBTA systems including communications, computer technology, fare collection, asset management and environmental remediation systems. It also rehabilitates non-revenue vehicles and equipment.

Reliability / MBTA / Track, signals, and power

FY2018-2022 size:

- \$1,285.6 million over five years

Justification for FY2019-2023 program size:

- Red/Orange Line Signal investments moved to RL/OL Improvements program (-\$332M)

Program performance:

Tracker target

- % of track segments with performance restrictions

PfP tool forecast

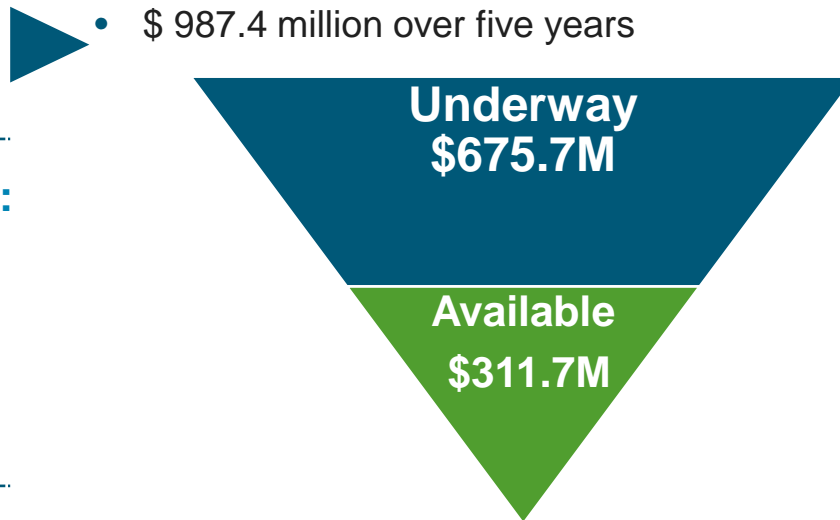
- Not forecasted in PfP tool

Other comments:

- Major projects underway include Green Line Signal Program, North Station Signals, Orange Line Traction Power, Commuter Rail Tracks, Ties, and Switches, and various projects executed on the Northeast Corridor/Providence/Stoughton Line in partnership with Amtrak
- Major Green Line track renewal in development

FY2019-2023 size:

- \$ 987.4 million over five years



Program purpose and need statement:

- This program rehabilitates, replaces and upgrades track, signal and power assets across the commuter rail and transit system.

Modernization programs



Modernization / MBTA / Accessibility

FY2018-2022 size:

- \$224.2 million over five years

Justification for FY2019-2023 program size:

- Increase in program size to reflect additional PATI priority investments in station reconstruction (e.g. high-level platforms) and vertical transportation (e.g. elevators)

Program performance:

Tracker target

- **Not established - platform accessibility**

PfP tool forecast

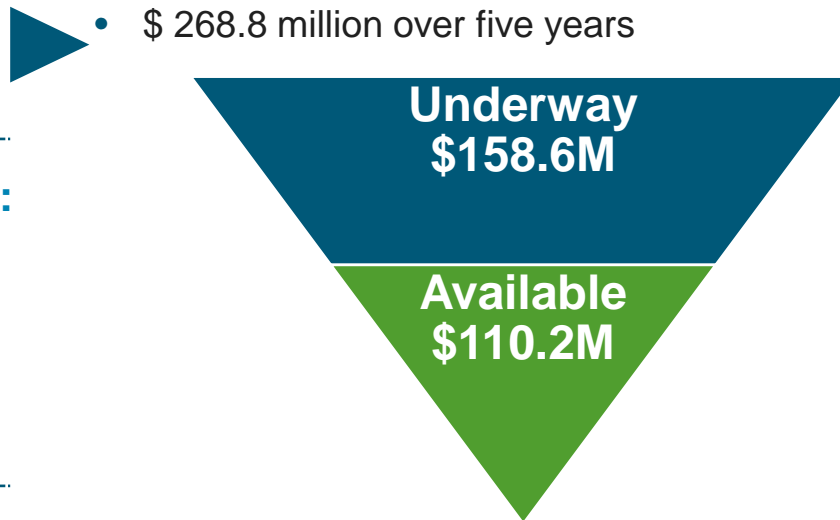
- **87% of stations ADA compliant by 2022**

Other comments:

- Major projects underway include elevator program and Symphony Station
- Accessibility projects often involve SGR improvements to stations as well

FY2019-2023 size:

- \$ 268.8 million over five years



Program purpose and need statement:

- This program improves accessibility at MBTA commuter rail, subway and bus stations.
- This program is necessary to meet the goals of the Authority's Plan for Accessible Transit Infrastructure ("PATI").

Modernization / MBTA / Risk Management and Mitigation

FY2018-2022 size:

- \$538.8 million over five years (as Federal Programs and Mandates)

Justification for FY2019-2023 program size:

- Renamed program to reflect proactive approach to safety, security, and risk management
- PTC moved to Commuter Rail Safety and Resiliency Program (-\$339M)

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

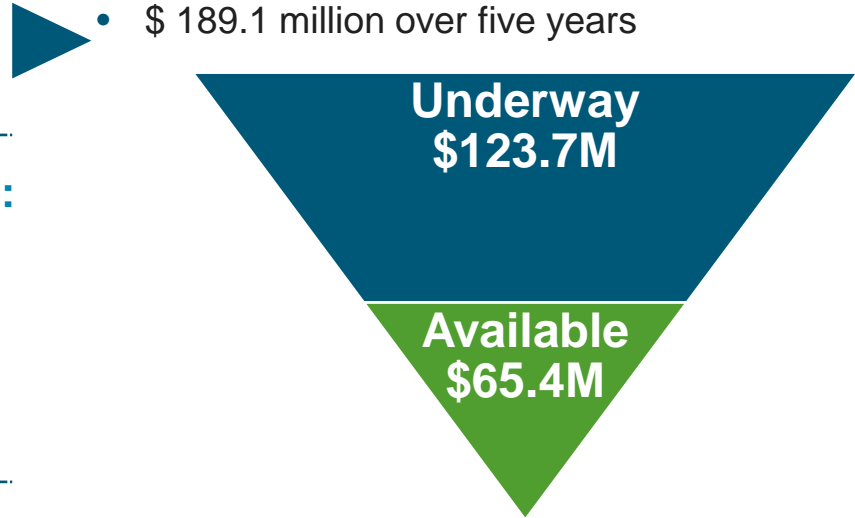
- **Not forecasted in PfP tool**

Other comments:

- Program name was Federal Programs and Mandates in FY2018-2022 CIP
- Major projects underway are Green Line Train Protection and systemwide security upgrades

FY2019-2023 size:

- \$ 189.1 million over five years



Program purpose and need statement:

- This program implements risk management initiatives as well as proactive efforts to improve workplace safety and system security

Modernization / MBTA / Process Improvements and Innovation

FY2018-2022 size:

- \$0.0 million over five years (part of \$622M System Improvements)

Justification for FY2019-2023 program size:

- Renamed from “System Improvements” to reflect projects that introduce technology or other tools to improve or modernize MBTA business processes

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

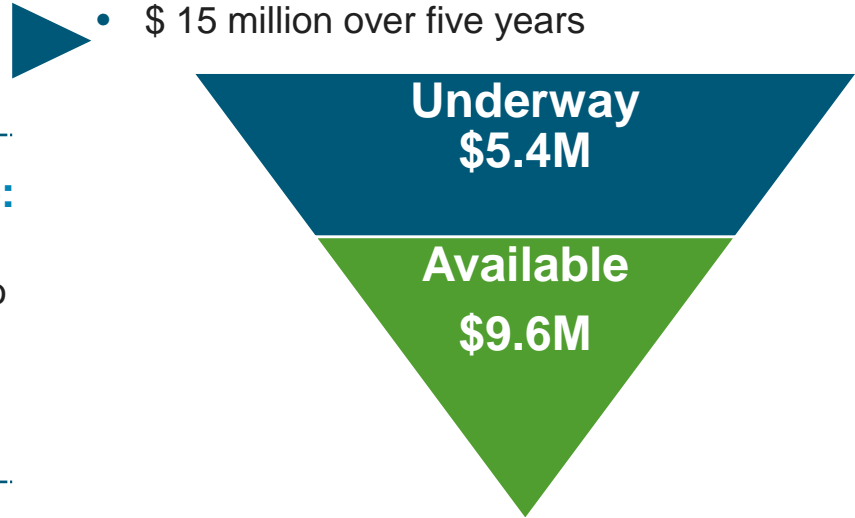
- **Not forecasted in PfP tool**

Other comments:

- Major projects underway are Green Line LEAN study, Commuter Rail vision, PMIS eBuilder implementation

FY2019-2023 size:

- \$ 15 million over five years



Program purpose and need statement:

- This program includes investments in innovations that enhance productivity or quality of MBTA services and capital programs.

Modernization / MBTA / Customer Experience and Technology

FY2018-2022 size:

- \$0.0 million over five years (part of \$622M System Improvements)

Justification for FY2019-2023 program size:

- Renamed from “System Improvements” to reflect projects that enhance customer experience through technology, signage, or other improvements

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

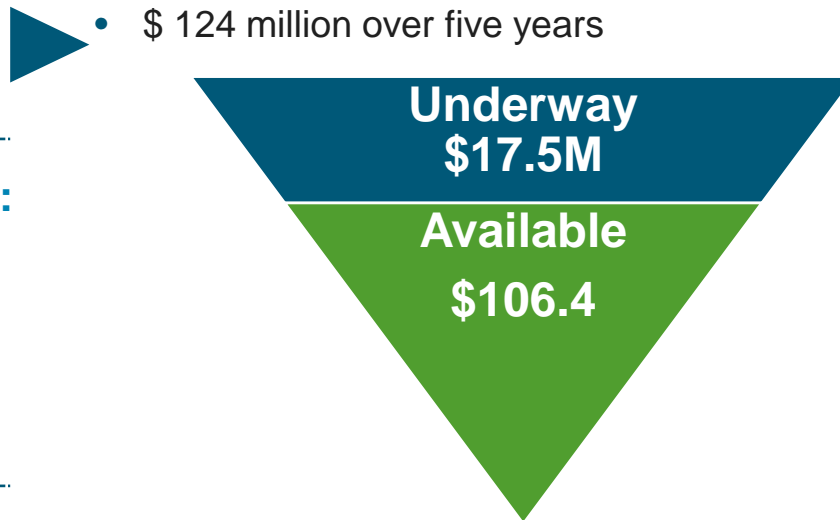
- **Not forecasted in PfP tool**

Other comments:

- Major projects underway are Park Street Wayfinding, T Digital Service, and Green Line Real Time Tracking.
- This program will be primarily funded with Pay-Go/Lockbox

FY2019-2023 size:

- \$ 124 million over five years



Program purpose and need statement:

- This program includes improvement projects that modernize the system and enhance customers' experience.

Modernization / MBTA / AFC 2.0

FY2018-2022 size:

- \$0.0 million over five years (part of \$622M System Improvements)

Justification for FY2019-2023 program size:

- AFC 2.0 is a high-profile and complex program that should be managed and monitored separately from other customer technology investments

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast


- **Not forecasted in PfP tool**

Other comments:

- Total investment in \$407 million over life of the project; program size reflects MBTA payments within the five-year CIP window

FY2019-2023 size:

- \$ 168.2 million over five years



**Underway
\$168.2M**

Program purpose and need statement:

- The AFC 2.0 program will implement a new reliable and convenient fare payment and collection system, integrated across all modes, to replace CharlieCards/Tickets and their supporting hardware and software.

Modernization / MBTA / Red Line/Orange Line Improvements

FY2018-2022 size:

- \$0.0 million over five years (part of multiple programs)

Justification for FY2019-2023 program size:

- The Red Line/Orange Line vehicle procurements, signals work, and infrastructure investments are a complex and high profile project with interdependencies across asset classes

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

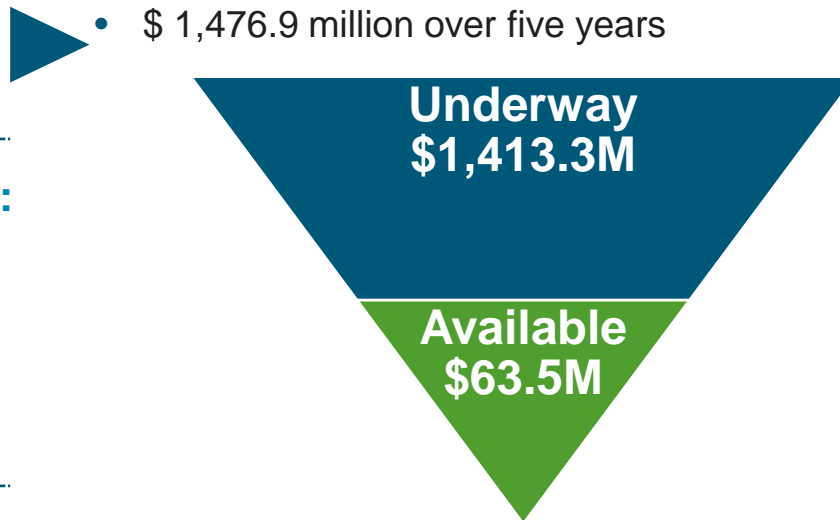
- **Not forecasted in PfP tool**

Other comments:

- Includes Red Line/Orange Line vehicle procurements previously in Revenue Vehicles program, Red Line Signals previously in Track, Signals, and Power program, and Cabot and Wellington Yard rebuild, previously in the System Improvements program

FY2019-2023 size:

- \$ 1,476.9 million over five years



Program purpose and need statement:

- The Red Line and Orange Line Improvements program includes the set of vehicle and infrastructure investments needed to fully modernize the fleet and achieve the service goal of three minute headways

Modernization / MBTA / Commuter Rail Safety and Resiliency (PTC)

FY2018-2022 size:

- \$0.0 million over five years (part of \$538.8M Federal Programs and Mandates)

Justification for FY2019-2023 program size:

- New program to reflect various safety and resiliency efforts underway on the Commuter Rail network, primarily PTC

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

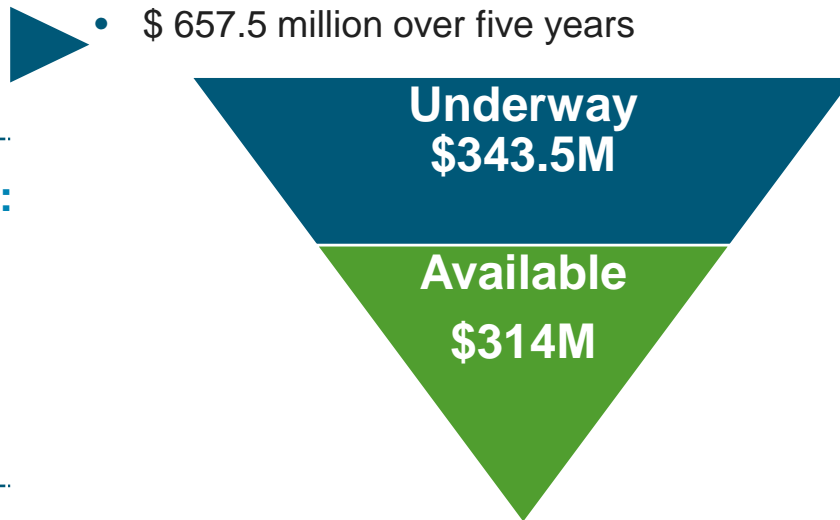
- **Not forecasted in PfP tool**

Other comments:

- Includes PTC Implementation from former Federal Programs and Mandates program, ATC implementation (new for FY19-23), tree trimming, and fiber installation (new for FY19-23).

FY2019-2023 size:

- \$ 657.5 million over five years



Program purpose and need statement:

- This program includes projects that improve the safety and resiliency of the Commuter Rail network, including the implementation of Positive Train Control.

Expansion programs

Expansion / MBTA / Green Line Extension

FY2018-2022 size:

- \$1,587.0 million over five years

Justification for FY2019-2023 program size:

- Green Line Extension is a complex and high-profile project with dedicated funding sources
- Overall program size decreased to reflect progress on Green Line Extension

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

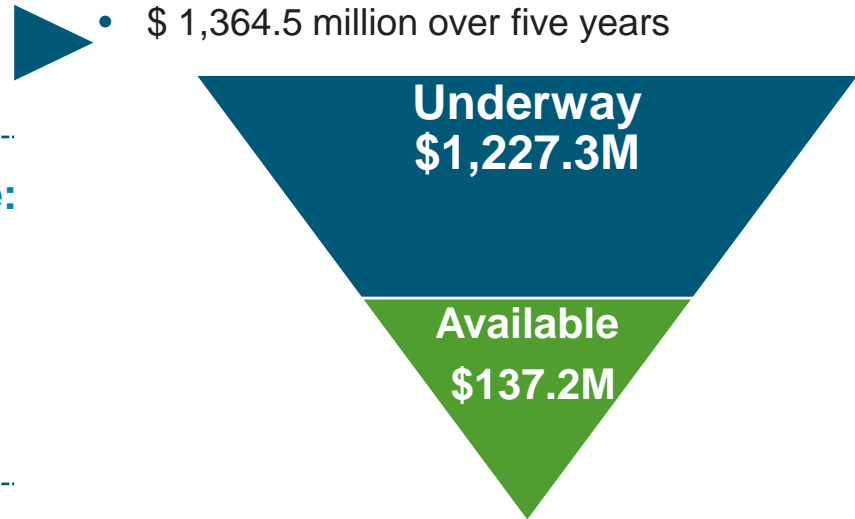
- **Not forecasted in PfP tool**

Other comments:

- Program size reflects funding sources for GLX.

FY2019-2023 size:

- \$ 1,364.5 million over five years



Program purpose and need statement:

- The Green Line Extension program includes the vehicles, stations and infrastructure to extend the Green Line from a relocated Lechmere Station in East Cambridge to Union Square in Somerville and College Avenue in Medford

Expansion / MBTA / Expansion projects

FY2018-2022 size:

- \$1,587.0 million over five years

Justification for FY2019-2023 program size:

- GLX moved to its own project

Program performance:

Tracker target

- **Not established in Tracker**

PfP tool forecast

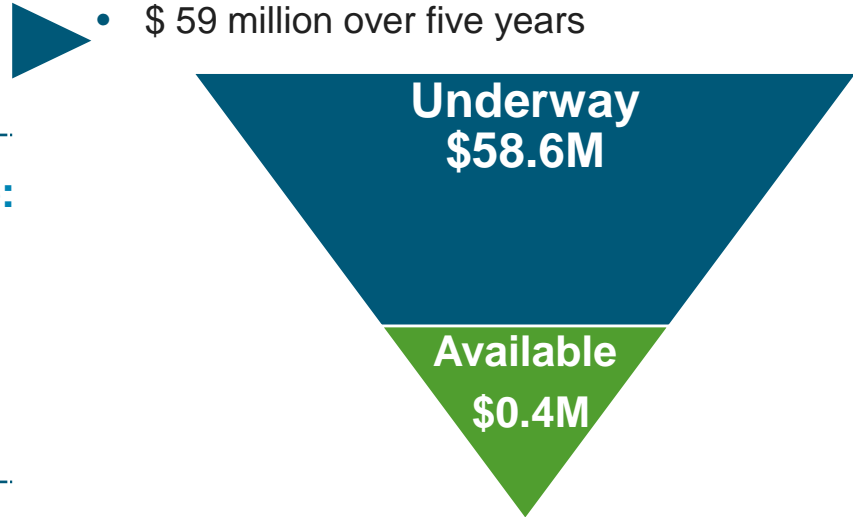
- **Not forecasted in PfP tool**

Other comments:

- Includes Silver Line Gateway, Blue Hill Ave Station, and MBTA related scope on South Coast Rail project

FY2019-2023 size:

- \$ 59 million over five years



Program purpose and need statement:

- This program makes targeted expansions in order to improve access to transit and statewide, including the Silver Line to Chelsea and Blue Hill Avenue Station on the Fairmount Line.